Homework #04
Web Hosting
Announce: 2008/11/25
Due: 2008/12/02 23:59:59
FAMP (FreeBSD + Apache + MySQL + PHP)

- **Apache 2.2**
  - `/usr/ports/www/apache22`
  - `apache22_enable="YES" (/etc/rc.conf)`
  - `/usr/local/etc/rc.d/apache22 start`

- **MySQL 5.0**
  - `/usr/ports/databases/mysql50-server`
  - `mysql_enable="YES " (/etc/rc.conf)`
  - `/usr/local/etc/rc.d/mysql-server start`

- **PHP 5**
  - `/usr/ports/lang/php5`
Virtual Hosts (1/2)

- Providing services for more than one domain-name (or IP) in one web server.

- IP-Based Virtual Hosts vs. Name-Based Virtual Hosts
  - IP-Based – Several IPs (or ports)
  - Name-Based – Single IP, several hostnames

- Apache Name-Based configuration example
  - /usr/local/etc/apache22/extra/httpd-vhosts.conf
  - Notice virtual host’s DocumentRoot permission
How Name-Based Virtual Hosts works?
  - It takes advantage of HTTP Headers.

To do this homework, you need 2 domain name
  - http://twbbs.org/
  - http://www.dhs.org/
  - http://www.no-ip.com/ (If you don’t have static IP)
You can use these tools

- http://www.htacceseditor.com/
Let users have their own web space

# User home directories
Include etc/apache22/extra/httpd-userdir.conf

UserDir public_html
UserDir disabled root toor daemon operator bin tty kmem games news man sshd bind proxy _pflogd _dhcp uucp pop www nobody mailnull smmsp
#
# Control access to UserDir directories. The following is an example
# for a site where these directories are restricted to read-only.
#
<Directory /home/*/public_html>
  AllowOverride FileInfo AuthConfig Limit Indexes
  Options MultiViews Indexes SymLinksIfOwnerMatch IncludesNoExec
  <Limit GET POST OPTIONS>
      Order allow,deny
      Allow from all
  </Limit>
  <LimitExcept GET POST OPTIONS>
      Order deny,allow
      Deny from all
  </LimitExcept>
</Directory>
Blog

- You can use
  - Wordpress
  - Movable Type
  - Others you like or Write a system yourself

- Don’t use BSP (blog service provider)
What is SQL (Structured Query Language)

- The most popular computer language which is used to create, modify, retrieve and manipulate data from relational database management systems.

- A multithreaded, multi-user, SQL Database Management System.
phpMyAdmin can manage a whole MySQL server as well as a single database over the World Wide Web.

Official Site: [http://www.phpmyadmin.net/](http://www.phpmyadmin.net/)

Documentation: [http://www.phpmyadmin.net/documentation/](http://www.phpmyadmin.net/documentation/)

Characteristics

- Browser-based, Supporting PHP5.2+, MySQL 5.0+, Open Source

There are four authentication modes offered: http, cookie, signon and config (the less secure one, not recommended).
Create another user with limited privilege
One of your domain name can use userdir, but another cannot.

- For example
  - web. example.org’s IP is 123.123.123.123
  - blog. example.org’s IP is 123.123.123.123
  - http://web.example.com/~ych/ is valid, but http://blog.example.com/~ych/ is invalid.
suphp

- A tool for executing PHP scripts with the permissions of their owners. By using this, user does not need set permission to others.
- Official Site: http://www.suphp.org/

Install suphp and config it

- Don't permit a php file execution if user except file owner has its write permission.
mod_rewrite

- If users access http://yourdomain1/yyyy/mm/dd/, open a page shows "You are reading 'yyyymmdd'".

- If user doesn’t access your site’s pictures(*.gif, *.bmp, *.jpg) from your site, redirect to http://yourdomain1/warning.htm to alert user.
  - Hint: HTTP_REFERER
Other Bonus?

- If you add extra features, please let TAs know. TAs will give bonus score according to degree of difficulty.
- This homework's score upper bound is 120.
You need two host names use same IP address.

When access http://yourdomain1/private/, user need enter id "nctucs" and password "sahw4" which is implemented by .htaccess.

System user sysadm can put file at ~/WWW/ and others can access it by visiting http://yourdomain1/~sysadm/. sysadm's password is your student id.

Your blog domain name is http://yourdomain2/

Users use cookie authentication when access your phpMyAdmin site http://yourdomain1/phpMyAdmin/ (You need to add a MySQL user for authentication). And notice that if others access http://yourdomain2/phpMyAdmin/, they can not access it.
Demo Time

- Please make your service available from 12/03 00:00 to 12/04 23:59.
- If your service is not available when TAs demo, you will not get any score for this homework.
- If you have special reasons for service failed, please let TAs know before due.